UNIVERSITY OF MONTANA

SCISSOR LIFT SAFETY PROGRAM

Environmental Health & Risk Management

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Appendix A: University of Montana Scissor Lift Familiarization Training Form

Appendix B: Operator Manual Acknowledgement Form

Appendix C: Scissor Lift Pre-Operation Inspection Form (or use form in Operator's Manual)

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I. Introduction

Scissor lifts are present on the University of Montana Campus which are used by University staff and contractors. The University recognizes that there are potential hazards associated with the use of these lifts. The following safety program is based on ANSI/SIA A92.6-2006 (Self-Propelled Elevating Work Platform) and is designed to ensure that scissor lifts are operated in a consistent and safe manner. The program also follows OSHA 1926.451 which regulates scissor lifts as mobile scaffolds.

II. Purpose

The purpose of the scissor lift safety program is to provide University employees, students and contractors guidance in the safe and proper use of scissor lifts. The program will cover responsibilities, training, inspection, maintenance, standard operating procedures, and recordkeeping.

III. Scope

This program applies to all University owned or rented scissor lifts designed to elevate personnel on a platform that is propelled by a powered lifting device, with the controls located on the platform itself. It applies to the departments who own or rent the equipment and the University employees/students and contractors who use them. The program does not cover vehicle mounted elevating and rotating work platforms.

IV. Responsibilities

A) Department Directors:

- Ensure that responsibilities of this program are assigned to individuals within their department
- Actively support the implementation and follow-through of this program within their department
- Ensure that adequate funding is available to support this program

B) Environmental Health & Risk Management (EHRM):

- Develop a scissor lift safety program and revise as necessary
- Ensure that initial training is provided to all lift operators through the cooperation from the departments who have designated operators.
- Conduct periodic audits of operator training records.
- Provide technical support to departments and employees when questions or concerns arise with regard to scissor lift safety.
- Conduct periodic audits to ensure that the annual, periodic, and pre-operation inspections are being completed appropriately.

C) Department Managers:

- Contact EHRM prior to the purchase of a scissor lift so that inventory information can be updated.
- Ensure that the operating and maintenance manuals have been received, and placed in a weather-proof compartment on the lift.
- If buying used equipment, ensure that an inspection is done on the lift prior to placing the unit in service.
- If renting a lift, ensure that the U of M lease agreement with Hold Harmless / Indemnification verbiage is present.
- When renting a lift initially, departments shall require that the rental agency provide specific lift familiarization training for the particular lift that they are renting prior to lift use. The form in Appendix A shall be signed by each trainee and the trainer for proper documentation.
- Ensure that all operators of the lift review the operator's manual and sign the acknowledgement form prior to the initial use of the lift (Appendix B).
- The Department must ensure that operators receive specific lift training from competent trainers, or the manufacturer or vendor, or an approved contracted trainer. Departments must document this training (Appendix A).
- The Department must ensure that no personnel operate a scissor lift if they have not been trained in both the classroom safety training and the specific lift training on the lift that they will operate.
- The Department must ensure that no personnel **ride** on a scissor lift if they have not been trained in the classroom portion of the lift safety training. A person not qualified as an operator for a specific lift may ride on that lift with an approved operator (assuming the lift is approved to carry more than one person) but they may not operate that lift.
- When safety-related concerns have been discovered through the annual inspections, periodic inspections or pre-operation inspections, or at any

other time, the lift shall be locked out of service until the item(s) has been repaired.

- When lifts are used outdoors, the Department must ensure that weather conditions are continuously monitored throughout the use of the lift and that an anemometer (wind velocity meter) is attached to the lift's personnel platform or a hand held anemometer is used**. Vertical aerial platform and scissor lifts may not be used when wind speeds reach 28 mph or more; *when there is a weather warning in effect for winds in excess of 28 mph;* when lightning is observed; or when thunderstorm warnings are in effect.**
- The Department must provide and encourage flexibility for the users of the lifts by giving them discretion of lowering the lift at any time if they have concerns for their safety.

D) Operators

- Review the operator's manual for all lifts that they use prior to the initial lift use. Documentation of this shall be completed using the "Operating Manual Acknowledgement Form" in Appendix B of this document.
- Know and understand the following about the lift that they operate, prior to the initial operation of the lift:
    1. Safe operation
    2. Hazardous conditions which jeopardize safety
    3. All control features of the lift
    4. All placard warnings
    5. All safety devices on the lift
    6. Where to locate the user manual
    7. Who is permitted to operate or ride on the lift.
- Perform a Pre-operation inspection of the scissor lift prior to each day's (or shift's) use of the lift. Documentation of the pre-operation inspections shall be performed by completing the Pre-Operation Inspection Form (Appendix C). Scissor lifts that are not in proper operating condition shall be immediately removed from service and reported to the appropriate departmental manager.
- Prior to setting up the lift at each new location, the operator shall conduct a work zone inspection to identify potential workplace hazards. Weather conditions must be continuously monitored and an anemometer must be present on all vertical aerial platform lifts through the duration of the use of the lift outdoors.
- If at any time, the operators are concerned for their safety, they may, at their discretion, lower the lift and stop their work activities.

V. Training Program

Only trained and authorized operators may operate a scissor lift at the University of Montana. To become authorized, staff must successfully complete an initial two-part training program: a classroom session and a specific lift familiarization session. Operators must demonstrate proficiency in the actual operation of all functions of the equipment. Each certificate will indicate the specific lift(s) the training participant is approved to operate based on the make and model. Staff who have no need to operate a lift but do have a need to ride on a lift with an authorized operator may attend the classroom training session only and will be issued a certificate that allows them to be a "passenger only".

The classroom safety training will be performed by EHRM or by Departmental personnel who have been certified as scissor lift trainers. The contents of the training will include the following:

- Purpose and use of operator manuals and where they must be located.
- Pre-operation inspection process
- Identification of malfunctions and problems
- Factors affecting stability
- Purpose of placards and decals
- Work zone inspections
- Safety rules and regulations
- Operator warnings, load capacity and instructions
- The use of wind monitoring equipment, including the lift anemometer for outside lift use, and reinforcement of the operator's authority to come down from the lift if they have safety concerns.

Re-training will be required of any operator that has been involved in a scissor lift incident; ; a different type of scissor lift is used; or when the operator has been observed performing unsafe practices involving the lift.

VI. Lift Inspections

Pre-Operation Inspections

Before each day's use or at the beginning of each shift that the lift is used, it must be given a pre-operation inspection (Appendix C). This inspection involves a visual inspection and functional test that includes the following criteria:

- Operating and emergency controls (ground & platform controls)
- Steering and brakes

- Personal protective devices
- Air, hydraulic and fuel system leaks
- Mechanical fasteners and locking pins
- Loose or missing parts
- Tires and wheels
- Placards, warnings, control markings and operating manuals
- Guardrail system
- Other items specified by manufacturer
- If used outdoors, a functioning anemometer

Because each make and model is different, the inspection criteria may differ. Please refer to the operator's manual for the specific criteria required for each particular lift that needs to be inspected. Each department shall identify a storage location for the completed pre-operation inspection forms. However, at a minimum, the last completed inspection shall be stored in a compartment or pouch on the lift. Additional inspections must be conducted after any occurrence that could affect the structural integrity of the equipment.

Work Zone Inspections

Before a scissor lift is used, the operator must visually check the work zone area where the lift is to be used, identifying potential hazards such as, but not limited to:

- Drop-offs, holes, unstable surfaces
- Slopes, ditches or bumps
- Debris and floor obstructions
- Overhead obstructions and power lines
- Hazardous locations and atmospheres
- Inadequate surface and support to withstand all load forces imposed by the lift
- Wind and weather conditions
- Presence of unauthorized people
- Other possible unsafe conditions

Depending on the nature of the workplace and the type of work being performed, additional items may be added to this list of criteria.

Periodic (Frequent) Inspections

A periodic inspection shall be performed on all scissor lifts on a quarterly basis (or in service use for greater than 150 hours), whichever occurs first, or more often if recommended by the lift manufacturer. A periodic inspection should also be completed if the lift has been out of service for more than three months prior to

use. An approved vendor shall be contracted with the cooperation of the Department who owns the lift, or the department will have personnel trained to do the inspection. The inspection shall include all items specified by the manufacturer for a periodic inspection. A periodic inspection shall include, but not be limited to the following:

- All functions and their controls for speed(s) smoothness, and limits of motion;
- Lower controls including the provisions for overriding of upper controls
- All emergency and safety devices;
- Lubrication of all moving parts, inspection of filter element(s), hydraulic oil, engine oil, and coolant as specified by the manufacturer;
- Visual inspection of structural components and other critical components such as fasteners, pins, shaft and locking devices;
- Placard, warnings and control markings;
- Additional items specified by the manufacturer

Annual Inspections

An annual inspection must be performed on all scissor lifts within 13 months from the date of the prior annual inspection. The inspection shall be performed by a qualified mechanic who is authorized to perform maintenance duties on the lift. An approved vendor shall be contracted with the cooperation of the Department who owns the lift, or the department will have personnel trained to do the inspection. The inspection shall include all items specified by the manufacturer for an annual inspection. Refer to the specific model number service manual.

VII. Lift Marking

In addition to any other markings or decals that are placed on the lift by the manufacturer, the following information shall be displayed on all scissor lifts in a clearly visible, accessible area and in a durable manner:

- The make, model, serial number, and manufacturer's name and address
- The rated workload, including rated number of occupants
- The maximum platform height

VIII. Maintenance

All maintenance that is performed on scissor lifts shall be performed by trained and experienced professionals. The owning or renting Department shall make

arrangements with an approved vendor/contractor, or have personnel trained to perform the required maintenance. All equipment should be serviced in accordance with the manufacturer's recommendations. Prior to making **any** modifications to the lift, the University must obtain written permission from the manufacturer. Battery charging of lifts should be done in an intrinsically safe environment with adequate ventilation. Where battery charging takes place, a 10 lb. ABC portable fire extinguisher must be available within 20 feet of the charging station.

IX. Standard Operating Procedure

To ensure safe practices, the following standard operating procedure shall be used when an authorized employee operates a scissor lift:

- Obtain authorization to use or operate the lift from your immediate supervisor
- Do not work on scissor lift covered with snow or ice or other slippery material except as necessary for removal of such material.
- Check the last pre-operation inspection for any comments or notes and perform a new pre-operation inspection on the lift. Document the inspection, and place it in the reserved storage unit on the lift.
- Perform a work zone inspection in the area that the lift will be used.
- Ensure the brakes are set before raising the lift.
- Ensure that the guardrails are installed and are in place and that the load being placed on the lift is within the rated capacity of the lift. **Do Not** stand on guardrails for extra height.
- Do not carry objects larger than the platform
- Do not exceed vertical reach limits
- Ensure that wind conditions and other horizontal (side) forces are within acceptable limits per the operator's manual and this policy.
- Do not place or attach fixed or overhanging loads to any part of the machine or attaching fixed or overhanging loads to this machine or push or pull toward any object outside the platform
- Treat all overhead power lines and communication cables as energized, and stay at least ten feet away.
- Ensure that all personnel on the lift have been trained and authorized to operate or ride on the platform.
- **Do Not** drive with the lift platform raised (unless the manufacturer's instructions allow this).

X. Fall Protection

- Ensure that access gates or openings are closed
- Stand firmly on the floor of the lift platform

- Do not climb on or lean over the guardrails or handrails
- Do not remove guardrails during operation
- Do not use planks, ladders or other devices as to increase working height

XI. Records Retention

Maintenance, inspection and training records shall be maintained for equipment and its operators. The following records must be maintained for three years by each department who owns a scissor lift:

- Work zone inspection documents.
- Pre-operation inspection documents.
- All training records.
- Annual inspection documentation, all maintenance performed, and all operators' manual acknowledgement forms.

Appendix A

University of Montana Scissor Lift
Specific Lift Familiarization Training Form

This form documents the required scissor lift training for University personnel. Each operator must be trained on each scissor lift that he/she operates. The Specific Lift Familiarization Training shall consist of a review of the following items:

a). All safety placards and warnings
b). All switches, drive mechanisms, adjustments, and controls
c). The functional operation of the lift
d). Proper battery charging procedures
e). Inspections and the inspection process

Aerial or Scissor Lift: _____ _____ _____
Lift Manufacturer Model Serial #

I certify that I have met with the trainee identified below and have reviewed the operations of the specific lift identified above and made myself available to answer any questions he/she may have had with regards to the operation of this lift.

_____ _____ _____
Print Trainer's Name Signature of Trainer Date

I certify that I have met with the trainer identified above and that he/she has reviewed with me the operations of the specific scissor lift identified above. I was given an opportunity to ask questions which, if any, were answered to my satisfaction and that I now have the necessary understanding of the operations of this lift. I am also certifying that I have received general training on the safe operation of scissor lifts through the Environmental Health and Risk Management Department or the specific University Department that owns or rents the lift. I have reviewed the operator's manual for this lift and have been given the opportunity to ask questions that I may have had.

_____ _____ _____
Print the Trainee's Name Signature of Trainee Date

Trainer's Department or Company Name: _____

Appendix B

Operating Manual Acknowledgement Form

By signing this document, I am certifying that I have reviewed a copy of the operations manual for the scissor lift shown below. Upon training and authorization by my department, I am expected to operate this lift in a safe manner. I understand that it is my responsibility to review and understand the safe operation of this scissor lift based on the training I receive and the manufacturer's recommendations. I understand that if, at any time, I have any questions regarding the information found in the user's manual, I can contact Environmental Health & Risk Management, my supervisor, or the manufacturer to obtain answers.

Scissor Lift Make: _____ Scissor Lift Model: _____

Name (print): _____ Department: _____

Operator's signature: _____ Date: _____

Appendix C

Scissor Lift Pre-Operation Inspection Form

The pre-operation inspection shall be performed prior to each day's or shift's use of the scissor lift by an authorized and trained operator of the lift. Documentation of the inspection shall be maintained by each department, with a copy of the most recent inspection document stored on the lift.

Check off the items that have been inspected or mark the N/A box if the item does not apply to the lift being inspected. Place any comments I the space provided below. If there are any of these items that are not satisfactory, place the lift out of service until the item is corrected.

Department lift belongs to: _____

Make of lift: _____ Model of lift: _____ Serial #: _____

Inspector's Name: _____ Date of inspection: _____

Item Inspected	OK	Not OK	N/A
Operating controls (base and operator console)	☐	☐	☐
Emergency controls	☐	☐	☐
Safety devices	☐	☐	☐
Pneumatic system (leaks)	☐	☐	☐
Hydraulic system (leaks)	☐	☐	☐
Fuel System (leaks)	☐	☐	☐
Loose/missing parts	☐	☐	☐
Tires and wheels	☐	☐	☐
Placards and warnings	☐	☐	☐
Operational manual	☐	☐	☐
Guardrail system & locking gate	☐	☐	☐
Anemometer present (outdoor usage)	☐	☐	☐
Other items	☐	☐	☐

Comments: _____

_____

_____

_____

Inspector's Signature: _____ Date: _____

Appendix D

Scissor Lift Work Zone Inspection Form

The work zone inspection shall be performed prior to using the scissor lift. One inspection may be performed for multiple tasks taking place in a single room/space per day. The work zone inspection must be performed by the individual who will be using the lift. Documentation of the inspection shall be maintained by each department and provided to EHRM on a monthly basis.

Check off the items that have been inspected and abate any safety issues that were identified prior to using the lift. Place any comments in the space provided below.

Department lift belongs to: _____

Location; bldg. or room number where lift will be used: _____

Inspector's Name: _____ Date of Inspection: _____

Item Observed	Completed	N/A
Drop-offs or holes	☐	☐
Slopes	☐	☐
Bumps or floor obstructions	☐	☐
Debris	☐	☐
Overhead obstructions	☐	☐
Hazardous locations and atmospheres	☐	☐
Inadequate surface and support	☐	☐
Wind and weather conditions	☐	☐
- Wind readings & forecasts indicate <28 mph		
- No lightning visible or forecasted		
- No other severe weather forecasted		

Do not operate lift when winds reach 28 mph or more, when a wind warning is in place of 28 mph winds or greater, or when lightning is observed or thunderstorms are in effect.

Presence of unauthorized people	☐	☐
Other possible unsafe conditions	☐	☐

Inspector's signature: _____ Date: _____